

## CLAIMS

What is claimed is:

- 5           1. A rotary orbital sander, comprising:  
          a motor having a rotatable shaft with a  
          radially off-set portion;  
          a suction housing mounted to the motor,  
          around said motor shaft and connectable with a vacuum  
10   source,  
          a sanding pad assembly mounted to the  
          radially off-set portion of said shaft;  
          said sanding pad assembly further including  
          a backing pad having a plurality of apertures  
15   therethrough and an annular frame having a  
          circumferential side wall including first and second  
          circumferential edges and disposed between said  
          suction housing and said sanding pad assembly;  
          a circular back wall extending from one of  
20   said circumferential edges and having an opening  
          therein sealable with said suction housing; and  
          the other of said circumferential edges  
          being attached to said backing pad.
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          including a plurality of radially disposed ribs  
          extending generally from said circumferential side  
          wall to a like plurality of leg members disposed  
          about said opening in said circular back wall,  
30   stiffening said sanding pad assembly and backing pad.

3. The rotary orbital sander of claim 1,  
wherein said sanding pad assembly further includes a  
sanding disk having a size and shape complimentary to  
said sanding pad, and a plurality of holes for  
5 alignment with the said apertures in said backing  
pad.